

**DIGITAL LOOP CARRIER OR OTHER MULTI-SERVICES ACCESS SYSTEM
AS A DATA AND VOICE PACKET SERVER**

ABSTRACT OF THE DISCLOSURE

5 A multi-services access system, such as a multi-services digital loop carrier (DLC) system for a telecommunications network, has a packet-mode card, such as a digital subscriber line (DSL) card, configured to receive data packets corresponding to one or more data signals and derived-voice packets from a single packet-mode customer premises equipment (CPE) unit, wherein the packet-mode card determines whether each received packet is a data packet or a derived-voice packet. The access system
10 also has a packet interface configured to receive the data packets from the packet-mode card and to transmit the data packets to a packet-switched network for packet-based switching. In addition, the access system has a derived-signal server configured to receive the derived-voice packets from the packet-mode card and to convert the derived-voice packets into a digital voice stream, as well as a controller and a circuit interface configured to receive the digital voice stream from the derived-signal
15 server and to transmit the digital voice stream to a circuit-switched network for circuit-based switching. Since the access system is able to assign resources dynamically to packet-mode CPE units (as opposed to prior-art DLC systems, which have resources pre-assigned), the system of the present invention is able to utilize system resources more efficiently. Moreover, since the system has an internal derived-signal server, there is no need to transmit derived voice signals outside of the system for conversion.